Rosa Patrícia dos Santos Marques Acácio e Correia

FACE-BODY EMOTIONS' RECOGNITION, EMPATHY AND COMMUNICATION – A STUDY IN PSYCHIATRIC NURSES

Dissertação para a obtenção do grau de Mestre

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Declaração de dissertação de mestrado

De acordo com o art.3 do capítulo "Tarefas a Realizar" do Regulamento do Mestrado em Comunicação Clínica, a presente Dissertação consta da realização de dois artigos de investigação, a saber:

ARTIGO DE INVESTIGAÇÃO I

Face-body emotions' recognition empathy and communication – a study in psychiatric nurses

ARTIGO DE INVESTIGAÇÃO II

Nurse´s communication with psychotic patient: the role of self-efficacy and burnout

O conjunto dos dois artigos de investigação submetidos para publicação em Revista Científica constituirá a matéria da dissertação para obtenção do Grau de Mestre.

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Índice

Abreviaturas

BESST - Bochum Emotional Stimulus Set

FBC - Congruent and Incongruent Face-Body Compound

IRI - Interpersonal Reactivity Index

SPSS - Statistical Standard Package for the Social Sciences

PT - Perspective Taking

EC - Empathic Concern

PD - Personal Discomfort

FS - Fantasy

MBI - Maslach Burnout Inventory

EE - Emotional Exhaustion

DP - Depersonalization

PA - Personal Accomplishment

ARTIGO DE INVESTIGAÇÃO I

Face-body emotions' recognition and communication – a study in psychiatric nurses

Resumo

Objectivo: Os doentes psiquiátricos frequentemente apresentam comportamentos desajustados, discurso desorganizado e expressão emocional alterada, o que pode prejudicar a sua capacidade de comunicar. Os enfermeiros a trabalhar em hospitais psiquiátricos, para superar essa dificuldade, necessitam utilizar competências de comunicação que sejam efetivas para colher e partilhar informações relevantes, para construir uma relação empática e garantir (melhorar) a adesão ao tratamento do doente. O reconhecimento de emoções é uma componente essencial de uma comunicação frutífera, no entanto estudos que examinam o papel dessa competência no relacionamento entre enfermeiros e doentes são escassos. Este estudo examina o reconhecimento de emoções dos enfermeiros de psiquiatria e explora a relação dessas competências com outras competências de comunicação e empatia.

Métodos: Participaram no estudo 52 enfermeiros (80.8% mulheres) a trabalhar nos serviços de internamento e consulta externa de um hospital psiquiátrico. As características sociodemográficas e profissionais foram avaliados. A habilidade de reconhecer emoções foi analisada através de *Emotions Revealed Photo Set*, *Bochum Emotional Stimulus Set* (BESST) e *Congruent and Incongruent Face-Body Compound* (FBC). Para a avaliação da empatia foi utilizado o *Interpersonal Reactivity Index* (IRI). Os resultados foram estudados utilizando análise estatística convencional, valores padronizados e correlações através do *Statistic Standard Package for Social Sciences* (SPSS), versão 20.0.

Resultados: A felicidade (84.0%) e a surpresa (84.0%) foram as emoções faciais identificados com maior precisão. Quando o estímulo foi a expressão corporal a raiva (98,1%), a felicidade (91.3%) e a tristeza (90.2%) foram as expressões identificadas mais correctamente. O valor total médio no IRI foi de 54,85 (DP 8.98). Valores mais elevados foram associados com a menor capacidade de identificar as emoções raiva medo e enojado através do *Emotions Revealed Photo Set*. Pelo contrário, o medo e a surpresa foram mais correctamente identificado pelos enfermeiros que apresentaram mais percepção de usarem estratégias de comunicação específicas.

Conclusão: Os enfermeiros apresentaram elevada capacidade para identificas emoções quando tanto a nível das expressões faciais como corporais, no entanto esta habilidade difere de acordo com a emoção no estímulo apresentado. Baixos scores no reconhecimento de emoções negativas foram encontrados nos enfermeiros mais empáticos, juntamente com a maior capacidade relatada pelos enfermeiros para comunicar com os doentes psiquiátricos. A capacidade de inferir as emoções dos doentes com base nas expressões faciais e corporais podem ser particularmente desafiantes para os enfermeiros de psiquiatria que necessitam simultaneamente de avaliar corretamente os estados emocionais dos doentes a fim de avaliarem correctamente os estados emocionais de seus doentes. Apesar das limitações, o papel da identificação de emoções na comunicação e na relação terapêutica no contexto da psiquiatria é destacado.

Palavras-chave: Reconhecimento de emoções, expressão facial e corporal, estratégias de comunicação, enfermeiros de psiquiatria, empatia.

Abstract

Purpose: Psychiatric patients' disrupted behavior, speech and emotional expression frequently impair their ability to communicate. To overcome this impairment nurses working in psychiatric hospitals need effective communication skills to gather and share relevant information, to build empathic relationships and guarantee (enhance) treatment adherence. Emotion recognition is an essential component of a fruitful communication, but studies examining the role of this ability in the relationship between nurses and their patients are scarce. This study examines emotion recognition in psychiatric nurses, and explores the relationship of this ability with other communication skills and empathy.

Method: Fifty two nurses (80.8% females) working in psychiatric inpatient and outpatients wards participated in the study. Ability to recognize emotions was evaluated using the Emotions Revealed Photo Set, the Bochum Emotional Stimulus Set (BESST) and the Congruent and Incongruent Face-Body Compound (FBC). Empathy (Interpersonal Reactivity Index - IRI) and socio-demographic and professional characteristics were assessed. The results were analyzed with conventional statistical analysis, standardized values and correlations using the Statistic Standard Package for the social science (SPSS) 20.0 version.

Results: Happiness (84.0%) and surprise (84.0%) were the most accurately identified facial emotions. When body expression was the stimuli, anger (98.1%), happiness (91.3%) and sadness (90.2%) presented the higher score of correct answers. The IRI totals mean score was 54.85 (SD 8.98). Higher scores were associated with lower ability to identify anger, fear and disgust in the Emotions Revealed Photo Set. On the contrary, fear and surprise were more correctly identified in nurses who stated to use specific communication strategies.

Conclusion: Nurses presented a high ability to identify emotions when facial and body expressions were used but this ability differs according to the stimulus presented. A lower score in the recognition of negative emotions was found in more empathic nurses coupled with higher reported ability to communicate with psychiatric patients.

The ability to infer patient's emotions based on their facial and body expressions can be particularly challenging to psychiatric nurses who need simultaneously to correctly assess patient' psychological states. Albeit with limitations, the role of emotion identification in communication and therapeutic relationship in psychiatry settings is underscored.

Key-words: Emotions recognition, facial and body expression, communication strategies, psychiatric nurses, empathy.

1. Introduction

Non-verbal emotions recognition

The importance of the non-verbal component of communication has been grounded in biological, social, cognitive and neurological sciences. The first description of specific facial and body expression came from Darwin[1-3]. Actually it is recognized that 80% of communication between individuals is non-verbal[4]. It includes a diversity of communicational behaviors without linguistic contents as facial expression, head nodding, hand gestures, body pose, etc[2]. The human body provides crucial evidences about people´s mental state[3, 5] and it is important in the expression and transmission of affective and emotional information[6]. Recognizing each person´s emotional information, on the base of their face and body expression is the key to "persons reading"[7]. This ability is an indicator of successful social interaction[5], and can provide information about a precise action or behavior emotionally driven. Research in emotion recognition has conventionally privilege the facial expression of emotions, but recently investigators have turned to emotional body expression challenging's studies[8]. Both body and face individually convey important data to the individual's interaction, transporting all sort of emotions capable to be recognized and essential for social interaction[9]. They exerce moreover a reciprocal influence as showed by Meeren and colleagues[3] who reported that the recognition of facial expression is strongly influenced by body language. Body and face can express conflicting or inconsistent emotional information[3]. According to the literature, while expressed body emotions deliver information and judgment about a precise action intension which can be related to these emotions, facial emotions expression can be more associated to a person´s mental state [5, 9].

The ability to recognize basic emotions is regarded as an "innate, automatic and universal" capability and is influenced by cultural standards[10]. Six basic emotions are generally described: happiness; surprise; fear; sadness; anger and disgust[10-13]. This emotions are considered as universal, present in all cultures at earlier stages of development, indicating an innate background[11].

The most used technique to assess emotion recognition is the presentation of a static image, usually photography[1, 9]. This technique was developed by Ekman and Friesen[14] and has been improved by other investigators.

Understanding non-verbal cues is one of the relevant communication skills and can be evaluated by the ability of emotion recognition, largely known as decoding skill[2]. In order to address patients' emotional concerns health professionals have to be able to recognize emotions[1, 15]. This skill is a source of rich information on the quality of the established clinical relationship[11]. In addition, some of the emotional signals carried by patients mirrors their illness state[2] reinforcing the importance of recognizing and interpret patients 'emotions.[10]. The response with appropriate concern to these non-verbal cues may positively influence the patient clinical state [6].

Empathy and emotions recognition

Empathy can be defined as the ability to recognize and link with the emotional state of another person´s[16] and put ourselves in the place of the others[17]. Empathy is viewed as having an positive role in interpersonal relationships[18, 19], particularly relevant in patents' care[20]. It is a vital component of a therapeutic relationship[20, 21], influencing the competence in history taking and physical examinations; clinical outcomes[19]; patient satisfaction [19, 22], decreasing patients 'anxiety[23] and adherence and improving the quality of care[20, 21].

Definitions of empathy are marked by controversy and ambiguity[22-25]. There is a wide consensus however in considering empathy a complex, multidimensional concept with diverse elements[5, 16, 18, 20, 22, 26, 27]. The concept of empathy suggested by Davis [26] was used in the present study. Empathy can be described as involving at least an affective (or emotional) and cognitive component or a combination of both components[22, 25]. The affective component comprises the ability to link to the feelings and experiences of another individual. The cognitive component comprises the ability to recognize the emotional state and experiences and understand the world from the point of view of another person[19]. Empathy, is considered an essential clinical competence of communication[6, 17] and a valuable skill for nurses [20]. In the clinical encounter the use of

empathic strategies such as a warm, friendly and helpful attitude are related with a more effective therapeutic relationship.[21] Empathy might facilitate nurse´s ability to identify the (verbally and non-verbally) expressed emotions of the patients, and conversely an empathic attitude involves the discrimination of the emotional state of patients and respond appropriately[6, 17].

Perceptual ability to recognize other people´s emotional states is considered a central mechanisms that enable the individual to properly reply to the "emotional tone of perceived situations" [28], central to the empathic response to the emotional state[5, 28, 29]. According to Theory of Mind-reading for example, this ability is crucial for representing specific mental states of other person (e.g. perceptions, beliefs and expectations), the more cognitive aspects of empathy[31, 30]. In clinical settings, decoding non-verbal signs helps professionals to understand the patient and express this understanding[31]. The link between empathy and emotions recognition is not fully understood[32] and research is needed on the relationship between emotional accurate recognition and self-perceived empathy. Particularly in psychiatric settings where patients may present abnormal emotional patterns and expression, professionals may have to interpret and decode disturbed emotions and their meaning besides recognize them.

Psychiatric context of care

Communication can represent a challenge in psychiatric practice. Psychiatric nurses dealing with severely ill psychotic patients[32, 33] have to develop abilities to correctly assess their patient' psychological states[10 34] albeit a (disturbed) emotional expression. Psychotic patients can express a wide range of emotions occasionally incongruent with their thoughts and behavior. Patients can be euphoric or extremely depress, obsessed with bizarre ideas or performing disturbing interpretations of the world (delusional ideas) and being distracted by hallucinations[34, 35]. Acute mentally ill can express disturbed behaviours[13] and psychotic symptoms interferes with the ability to communicate effectively[10, 34, 35], challenging the interaction with health professionals[34, 35]. As said above the human body, and in particular the facial area, gives information about the person´s mental state[5]. Patient expression reproduces their internal

emotional state[10] and might reflect their illness state[2]. Thus, emotion recognition is a core skill for nurses working in mental health.[10] In psychiatric context, nurses need to acquire the understanding of patients 'complex behaviors. They should focus on the experience of the patient, understanding their perception and concern [31, 36,36] which requires communicating about the symptoms, emotions and their significance. Len Bowers and colleagues[34] stated that the information of how nurses should interact with psychotic patients is scarce. To provide an appropriate care, nurses must access patient reality and their truth, seeking clarification of meaning and deepen understanding[37], which is depend of the clinic empathy. Otherwise, the patients' behavior will not be understood and the nurse-patient interaction may fail to contribute to health outcomes[38].

Aims

The presented study aimed to 1) examine psychiatric nurse's ability to recognize facial and body emotional expression using static stimulus; 2) assess empathy and 3) explore the relationships between of the emotion recognition ability, empathy and other clinical communication strategies.

2. Methods

Participants

Fifty two nurses working in inpatients and outpatients wards of a psychiatric hospital in the Northern Region of Portugal participated in the study. Recruitment of participants followed a snow ball approach and the participation was voluntary. A communication skills workshop was proposed to all the nurses who entered the study.

Procedures

Invitation to participate was presented exclusively to nurses working in acute intensive ward, acute and chronic ward and outpatient ward in order to guarantee daily contact

with psychotic patients. Conversely service directors, day center, home care nurses and nurses working in the occupational therapy units were excluded. The data collection was performed between May and September 2013. After the delivery of verbal information about the study aim and procedures, the written information, informed consent form and the battery of questionnaires for data collection was delivered in an envelope by one of the researchers. After completion of the questionnaires, participants were requested to deposit the signed inform consent and the evaluation instruments in two separate boxes in order to maintain confidentiality and anonymity. A code number was attributed to each questionnaire. Using a different nurse sample a pretest was performed to estimate feasibility and elucidate difficulties and doubts regarding study procedures and assessment battery.

Instruments

1. *Socio-Demographic and professional characterization*

An original questionnaire was used to assess the socio demographic and professional characteristics of the studied population including age, gender, professional and academic qualifications and employment status.

2. *Clinical Communication strategies questionnaire*

Additionally, specific communication strategies in the nurses-psychotic patients' interaction and patient-centered communication (empathic strategies) were evaluated using a self-report original questionnaire. The questionnaire was based on a literature review on general and specific clinical communication skills assessment. Nurses rated their interaction with psychotic patients using a five point Likert scale (0 "completely disagree" to 4 "completely agree").

3. *Emotion´s recognition assessment*

Three instruments were used to evaluate nurses' ability to recognize emotions trough body and facial emotion expression: Emotions Revealed Photo Set, Bochum Emotional Stimulus Set and The Face Body Compound. Permission was obtained from the authors

and participants were asked to identify the emotion related with each expression without establishing a time limit.

3.1. Emotions Revealed Photo Set[39]. This set includes a collection of 12 black and white photograph´s according Paul Ekman protocol[39]. To evaluate the ability to recognize emotional cues the participants were asked to label the facial emotion expression by selecting one of the alternative responses (anger, fear, disgust, surprise, sadness and happiness).

3.2. Bochum Emotional Stimulus Set (BESST)[40]. From the original set developed by Patrizia Thoma and colleagues[40], a collection of 12 black and white body images was selected and randomly presented to the participants. They were requested to mark the body emotional expression (body pose) selecting fear, disgust, happiness, sadness, surprise and anger.

3.3. The Face Body Compound (FBC)[3]. This set of images was created using photo-editing software by Beatrice de Gelder and coworkers[3] in order to evaluate the competence to identify emotions according to the congruence between bodies and face emotional expression. The faces and bodies used were cut out and carefully sized and combined in realistic proportions (face-body ratio of 1:7) to create new "identities"[3]. A collection of eight images was chosen including four control images and four face body compounds either congruent or incongruent. It was asked to the participants to label the emotion by selecting two alternatives (anger and fear).

4. Interpersonal Reactivity Index (IRI)

Self-reported empathy was assessed with the Portuguese version of the Interpersonal Reactivity Index (IRI)[24]. The original version has considerable value for investigations of the multidimensional nature of empathy and has been shown to have reliable measurement sensitivity[24]. The IRI is composed of four independent dimensions of empathy divided into four subscales. Two affective dimensions: Personal Distress (PD) defining the ability to respond experience distress in stressful situations, Empathic Concern (EC) – ability to participate in other capacity feelings; and two cognitive dimensions: Perspective Taking (PT) – ability to adopt the perspective and attempt the others point of view, Fantasy (FS) – the ability to use creativity and imagination to

experience other feelings in movies or fictional situations[24, 26]. The Portuguese version includes 24 questions using a Likert scale from 0 "does not describe me well" to 4 "describes me very well" and respecting the same four factor structure, showed good psychometric properties regarding validity, reliability and sensibility score can range from 0.74 to 0.73 [24] (see Table 5).

Ethical considerations

The study was submitted and approved by the Ethics Committee and Administration Council of the hospital (reference number 5/2013). After being informed of the study's goals, methods, expected benefits and possible discomfort all nurses signed an informed written consent form. The confidentiality and privacy of the collected data were guaranteed.

Statistical analysis

Conventional statistical analysis, standardized values, graphics, t-tests, Pearson and Spearman Test correlations were used with SPSS v.20.0. The Independent T-test, and Paired sample T-test was used to compare quantitative measures. For the categorical variables the Chi-square test were also used. The confidence interval (CI) used was 95 % and the significance level for tests was established at $\alpha \leq 0.05$.

3. Results

Socio-Demographic and professional characterization

From the 52 nurses included in the study, 42 (80.8%) were female. The mean age of the total sample was 36.9 (SD 9.33) years. Participants presented a mean of 13.1 (SD 8.84) years of professional experience. The education showed a mean value of 16.0 (SD 2.65) years. A total of 43 (82.7%) nurses had a graduate´s degree and 7 (13.5 %) nurses presented a master´s degree. Thirty five nurses were clinical nurse specialists (psychiatric and mental health), with a mean experience of 6.6 (SD 6.10) years. Five

had clinical communication training (9%). The majority of the sample was working in chronic inpatients ward (44.2%), 8 (15.4%) in acute inpatients ward, 7 (13.5%) in intensive inpatients ward and 5 (9.6%) in outpatients ward. The mean number of hours of work per week was 37.7 (SD 7.80) and the majority (76.9%) performed rotated shifts. The mean number of patients per shifts was 16.4 (7.54). The social-demographic and professional characterization was similar in both genders and is detailed in Table 1.

Table 1: Socio-demographic and professional characterization

	TOTAL n =52	**WOMAN** n = 42	**MEN** n = 10	***P***
Age (years)[1]	36.9 (9.33)	36.9 (9.26)	36.9 (10.1)	0.994[3]
Range	25-61	25-57	27-61	
Marital status[2]				0.203[4]
Single	21 (39.9)	18 (42.9)	3 (30.0)	
Married	24 (46.1)	17 (40.5)	7 (70.0)	
Divorced	7 (13.5)	7 (16.7)	0 (0.0)	
Education (years) [1]	16.0 (2.65)	16.2 (2.72)	15.3 (2.34)	0.391[3]
Academic Degree [2]				0.644[4]
Graduate´s Degree	43 (82.7)	35 (83.3)	8 (80.0)	
Master´s Degree	7 (13.5)	5 (11.9)	2 (20.0)	
Clinical Communication training[1]				0.655[4]
Yes	5 (9.6)	4 (9.5)	1 (10.0)	
Clinical nurse specialists				
Yes[2]	35 (67.3)	28 (66.7)	7 (70.0)	0.655[4]
Years of experience[1]	6.6 (6.18)	6.9 (6.34)	4.8 (5.56)	0.462[3]
Experience (years)[1]	13.1 (8.84)	13.0 (8.65)	13.3 (10.07)	0.930[3]
Range	1-37	1-32	3-37	
Ward services[2]				0.132[4]
Outpatients	5 (9.6)	5 (11.9)	0 (0)	
Long term inpatients	8 (15.4)	7 (16.7)	1 (10.0)	
Short term inpatients	23 (44.2)	19 (45.2)	4 (40.0)	
Intensive inpatients care	7 (13.5)	4 (9.5)	3 (30.0)	

[1] Mean (Standard Deviation); [2]n (%); [3] T-Test; [4] Chi-square Test

Emotion recognition assessment

The percentage of recognition accuracy for the total emotions of the Emotions Revealed Photo Set was 70.0% (missing values 5.3%).

Facial expression recognition revealed a higher number of correct answers for the happiness expression (84.0%) and surprise (84.0%). Anger and disgust expressions presented the lower number of correct answers (47.4% and 46.0%, respectively).

Table 2: Accuracy of facial expression emotion´s recognition

Presented stimuli	Identified emotion						Missing
	Happiness	Surprise	Sadness	Fear	Anger	Disgust	
Happiness	**84.0**	0.0	0.0	0.0	0.0	4.0	3.8
Surprise	0.0	**84.0**	0.0	13.0	1.0	1.0	3.8
Sadness	0.0	3.1	**64.9**	14.4	8.2	4.1	6.7
Fear	0.0	49.5	0.0	**47.5**	3.0	0.0	2.9
Anger	1.0	9.3	19.6	5.2	**47.4**	5.2	6.7
Disgust	1.0	0.0	15.0	0.0	23.0	**46.0**	3.8

Note: The percentage of correctly identified emotions is given in rows in bold font, while the columns represent the possible choices. Additionally, the last column indicates the percentage of missing.

Table 3: Accuracy of body expression emotion´s recognition

Presented stimuli	Identified emotion						Missing
	Anger	Happiness	Sadness	Fear	Surprise	Disgust	
Anger	**98.1**	0.0	0.0	0.0	0.0	0.0	0.0
Happiness	6.8	**91.3**	0.0	0.0	0.0	1.0	1.0
Sadness	0.0	1.0	**90.2**	2.9	1.0	2.0	1.9
Fear	2.0	2.0	25.0	**58.6**	4.0	8.0	4.8
Surprise	3.0	4.0	15.2	12.1	**45.9**	5.1	5.8
Disgust	1.0	1.0	1.0	44.9	12.2	**34.7**	5.8

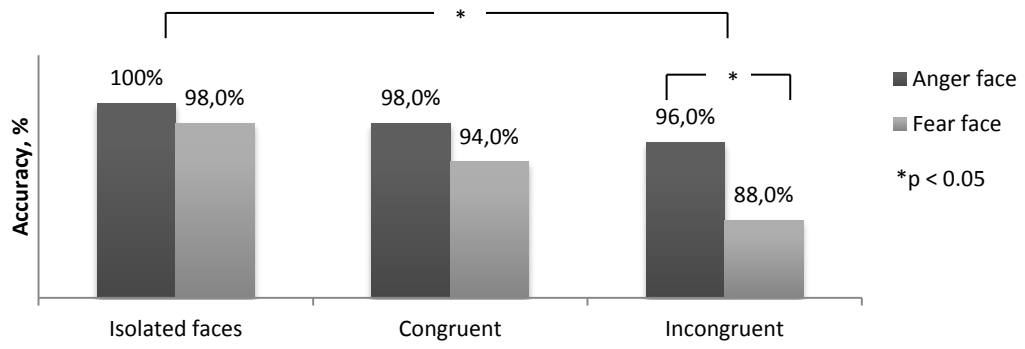
Note: The percentage of correctly identified emotions is given in rows in bold font, while the columns represent the possible choices. Additionally, the last column indicates the percentage of missing.

Anger (98.1%), happiness (91.3%) and sadness (90.2%) presented the higher score of correct answers in the BESST while surprise (45.9%) and disgust (34.7%) showed the

lower number of correct responses. The percentage of recognition accuracy for the total emotions in the BESST was 66.2% (missing values 3.2%). The percentage of errors for each stimulus presented was also calculated for each emotion. Table 3 and 4 present the participant's responses to facial and body emotional expressions.

Identification of emotions in a congruent and incongruent face body compound (FBC) showed a mean of 97% (SD 0.31) correct answers when the stimulus was a face and body congruent (angry and fear) images and 91% (SD 0.51) when incongruent images where presented (angry and fear). When used the control stimuli participants showed correctly judgment in 99 % (SD 0.14) of isolated faces and 56.5 % (SD 0.95) of isolated bodies, with significant differences between isolated stimuli. Results of FBC assessment for each emotion used are shown in graph 1.

Graphic 1: Accuracy of FBC stimulus recognition



With the exception of surprise (p=0.038) emotion recognition assessment presented similar results regarding participants' gender and professional characteristics.

Empathy evaluation - Interpersonal Reactivity Index (IRI)

The total Empathy measured by IRI showed a mean score of 54.85 (SD 8.99). Table 4 shows the results for each IRI sub-scale. Perspective taking (PT) subscale presented a mean score of 13.21 (SD 2.93); Fantasy (FS) a mean score of 12.3 (SD 4.66); Empathic Concern (EC) a mean score of 16.4 (SD 3.56) and Personal Distress (PD) a mean score

of 8.9 (SD 3.82). Similar results were found comparing participants' by gender and professional characteristics.

Table 4: Empathy evaluation (IRI)

IRI subscales	Total n = 52	Women n = 42	Men n = 10	*P*
Perspective-taking (PT) [1]	13.2 (2.93)	13.4 (2.96)	12.3 (2.79)	0.278[2]
Range	7 - 20	7 - 20	7 - 17	
Fantasy (FS)	12.3 (4.66)	12.6 (5.04)	11.5 (2.59)	0.529
Range	3 - 24	3 - 24	8 - 15	
Empathic Concern (EC)	16.4 (3.56)	16.5 (3.72)	16.2 (2.90)	0.828
Range	10 - 24	10 - 24	10 - 20	
Personal Distress (PD)	8.9 (3.82)	9.2 (3.88)	7.7 (3.47)	0.279
Range	1 - 20	1 - 20	4 - 15	
Total Empathy	50.9 (9.08)	51.6 (9.48)	47.70 (6.68)	0.223
	35 - 75	35 - 75	40 - 61	

[1] Mean (Standard Deviation), [2] T- test.

In order to evaluate the internal consistency of IRI, the Cronbach´s Alpha was determined for the scores of each sub-scale. Table 5 shows the original values and values detected in this study for IRI sub-scales. As presented, the results indicate satisfactory internal consistency for the sample.

Table 5: Values of Cronbach´s alpha of the Interpersonal Reactivity Index (IRI)

	Alpha 1*		Alpha 2**	Alpha 3***
	W	M		
Personal Distress (PD)	0.76	0.68	0,81	0.78
Empathic Concern (EC)	0.70	0.72	0,77	0,68
Perspective Taking (PT)	0.62	0.61	0,74	0,73
Fantasy (FS)	0.81	0.79	0,83	0.82

* Original study; ** Portuguese version; *** current study; W = women, M = men.

Correlations between empathy (IRI) and emotions recognition

According to a high or low score in IRI subscales (cut-off 12) responders were separated in two groups, in order to study the association of empathy with emotion recognition. Statistically significant negative correlations were detected exclusively in the high empathy group, between IRI subscales score and negative emotion recognition in the Emotions Revealed Photo Set - EC and ability to identify anger and fear (r=-0.462 *p*=0.001; r=-0.301, *p*=0.044, respectively) FS and anger recognition (r=-0.499; p=0.018) and PD and disgust recognition (r=-0.813; *p*=0.014). No other significant correlation was detected.

Correlations between clinical communication strategies and IRI

Empathy evaluation by IRI revealed statistically significant positive correlations with specific communication strategies reported by nurses in their interaction with psychotic patients. The EC subscale presented the higher number of positive correlations as presented in table 6.

Table 6: Positive correlations between clinical communication strategies and IRI sub-scales scores

CLINICAL COMMUNICATION STRATEGIES	IRI			
	EC	PT	FS	Total
Gathering information - Ability to identify positive symptoms *"For me, it´s essential to identify thought and perception disturbances"*	0.274[1] 0.049*	–	–	–
Gathering information - Ability to deal with positive symptoms *"Redirect to reality and introduce doubt, allows me to properly deal with thought and perceptions' disturbances."*	0.353 0.012**	–	0.320 0.024*	0.393 0.005**
Empathic attitude and attending behavior *"I attempt to show attention and emotional warmth to the patient."*	0.366 0.008**	–	–	0.298 0.034*
Addressing emotions. *"I think that I deal properly with patient 'emotions."*	0.306 0.029*	0.332 0.017*	–	–
Identify emotions *"I describe myself as a person who can easily identify the emotions of the patient."*	0.323 0.021*	–	–	–

Response to emotions *"Being attentive to the patient 'emotions helps me to give a proper answer."*	0.281 0.043*	0.275 0.049*	–	–
Response to intense emotions *"I´m able to be empathic when psychotic patients express strong emotions."*	0.317 0.022*	0.334 0.016*	–	0.284 0.041*

[1] Pearson´s correlation (r); *correlation is significantly at the 0.05 level; **correlation is significantly at the 0.01 level.

Correlations between clinical communication strategies and emotions recognition ability

Statistically significant correlations were detected between emotions recognition ability and specific communication strategies, detailed in table 7.

Table7: Significant correlations between clinical communication strategies and emotions recognition ability

CLINICAL COMMUNICATION STRATEGIES	FACIAL STIMULUS		BODY STIMULUS		
	Happiness	Surprise	Fear	Surprise	Total
Gathering information - Ability to identify positive symptoms *"For me, it´s essential to identify thought and perception disturbances"*	0.293[1] 0.035*	–	–	–	–
Gathering information - Ability to identify positive symptoms *"For me, it´s important to identify the exacerbate factors of thought and perception disturbances""*	–	0.383 0.006**	–	–	–
Empathic attitude and attending behavior *"I attempt to show attention and emotional warmth to the patient"*	–	–	0.387 0.005**	–	0.330 0.018*
Addressing emotions *"I think that I deal properly with the patients' emotions"*	–	–	0.349 0.012*	–	–
Identify emotions *"I describe myself as a person who can easily identify the emotions of the patient"*	–	–	–	- 0.298 0.034*	–

[1] Pearson´s correlation (r); * correlation is significantly at the 0.05 level; ** correlation is significantly at the 0.005 level.

4. Discussion

Nurse's emotion recognition ability

The results of this study show that nurses working in psychiatric settings were able to recognize six basic emotions using static facial and body stimulus. For facial stimulus, as reported in previous studies a generally good recognition accuracy (70.0% facial stimulus set; 66.2% body stimulus set - BESST) was found in our population. Happiness and surprise facial expression were promptly identified while disgusted, anger and fear faces were the most difficult to recognize (less than 50% of accuracy). According with the literature, happiness is the best recognized emotion in the general population, and Thoma and colleagues suggest that "this might be due to greater familiarity with happy facies"[40]. Other studies have reported happiness and surprise as the best recognized[14, 41-44], facial emotional expression and anger and fear as the most difficult ones[41-46].

Interestingly, the recognition of emotions using body as the stimulus revealed that anger, happiness and sadness were the best recognized, while disgust was the most difficult category to label, followed by surprise and fearful. These findings are in line with previously reported[8, 45] and in particular with body emotions recognition in the original BEEST of Thoma and colleagues[40]. Is expected that some emotional expressions might be more difficult to distinguish than others, possibly because they are more complex and vague or product special demands on the perceptual systems[13]. Systematic patterns of deviating choices, more evident for fear and surprise facial stimuli, and disgust and fear in BEEST have been identified, attributed to morphological similarities between the intended and the equivoque selected expressions[40].

Recent data showed that different types of context might influence the recognition of facial expression as the presentation of whole bodies[47]. Meeren and colleagues (2005)[3] tested two combinations of facial and bodily expression, using congruent and incongruent expressions for anger and fear. The results showed that congruence significantly increases accuracy of recognition, and body language biases facial judgment of the emotion expressed[3]. Similarly, Van Den Stock and colleague[48] (2007)

investigated the combined perception of human facial and bodily expression, and Aviezer and colleagues (2012)[49] highlighted the critical role of contextual body and scene information in the perception of facial expression. Our results also showed that accuracy is higher when face and body expressed the same emotion, indicating that the body expression is a factor of ambiguity for the identification of facial emotional expression.

A study performed by Minard (2013)[10] compared the ability of psychiatry nursing students and professionals found that professionals were significantly better than students in emotion recognition concluding that training can improve the ability of nurses to identify emotions. In the present study no differences were detected in more experienced nurses regarding emotion recognition.

Nurses self-reported empathy

The second aim of the current study was to assess nurses' perceived empathic skills using the IRI scale. The results were in line with the empathy multidimensional concept, involving the affective and cognitive components. Perspective taking (PT) generally presents the highest mean score in the general population[19]. However, in the current study Empathic concern (EC) presented the highest score. Nurses included in the present study revealed a low to moderate level of empathy in all dimensions which is in line with other studies[38]. However the systematic review performed by Yu and Kirk (2008)[20] and Derkenson and colleagues (2013)[23] report inconsistent results on nurses empathy evaluation as a consequence of the difficulty in measuring empathy and the need for rigorous tools[20, 23]. For the current study, the internal consistency of the assessment tool (IRI) was calculated indicating good reliability and adequate internal consistency.

Research showed that recognition of emotions ability and empathy might be influenced by factors as gender and professional characteristics. In the current investigation this associations was also evaluated. Gender differences in emotions recognitions ability and empathy have been reported with females described as more receptive than men to emotional signals, a quality that can contribute to a better

understanding of others[19, 20]. Women are also more able to perceive facial [10, 42, 50] and body emotional expression [51]. A trend was detected in our study to higher empathy and facial and body emotion recognition in women that reached statistical significance for surprise, consistent with previous studies [43].

Self-reported empathy and emotion recognition ability association

To the best of our knowledge, no previous study was conducted to assess the association between nurses' self-reported empathy and emotion recognition, in psychiatric settings. Studies relating these two variables analyzed neuropsychiatric patients' populations[30, 52, 53]. One of the aims of this research was to explore the relationship between self-reported empathy and emotions recognition.

By research is supposed that, empathy might facilitate nurse´s ability to identify the (verbally and non-verbally) expressed emotions of the patients[6, 17]. Previous studies have reported a positive association between empathy, conceptualized either as a trait or a skill, and accurate identification of emotions[5 29]. In accordance with the Theory of Mind-Reading, central for empathic understanding in particular, for the more cognitive aspects of empathy[54].

In the current study, nurses with higher self-reported empathy on the contrary presented a negative significant correlation with the ability to identify negative emotions anger, fear and disgust when facial stimulus were presented. These were the less accurately identified emotions in our sample, and as professional working in psychiatric settings and particularly with severely ill patients, these findings may suggest a specific pattern. Nurse have to develop abilities to correctly assess their patient' emotional states[10, 34], since acute and severe mentally ill present a challenge in the interaction with health professionals[34, 35]. Psychotic patients often display incongruent and abnormal emotions and nurses have to interpret and respond according to the pathological state, more than to the emotional expression *tout court*.

Soria Bauser and colleagues (2012)[5] also found a negative association between self-reported empathy and the emotion of angry. They concluded that cognitive empathy could be related to lower ability to identify angry faces, emotion that usually does

convey an adequate emotional response[5]. In fact emotional response depends not only on the individual cognitive ability to recognize the emotion presented in the stimulus, but also upon individual emotional reaction to the stimulus. Individuals are constructed to respond with emotion to emotion[1]. Both of these respondent characteristics contribute to a particular empathic response[26].

Finally the use of self-reported measures may not accurately reflect the exact empathic capabilities of nurse´s, as suggested by the evaluation performed by the communication skills questionnaire[53].

Communication strategies assessment and association with emotion recognition

Effective communication is a fundamental element of nursing care, hampered in psychiatric contexts. Requires engagement and the use of different adjustments, strategies, approach and interaction[34]. The correlation between emotions recognition and empathy and communication strategies used in the interaction with psychotic patient was examined.

Reynolds and colleague[38] reported that psychiatric nurses frequently found difficult to respond to patient´s direct requests for information, to discuss feelings with them, and to help patients focus on areas of concern, suggesting that these difficulties might be due to the absence of a therapeutic relationship[38]. We found a positive correlation between nurse's empathy evaluated by IRI and the ability to gather information consistent with the literature. Research suggest that nurses in order to acquire understanding of psychotic complex behaviors should center on the patient experience, which is depend of the clinic empathy[38]. Moreover Empathic Concern and the ability to use creativity and imagination to fictional experiences (FS) were associated with nurses' ability to identify psychotic symptoms and deal with those symptoms. There is a large support in the literature for nurses' empathic attitude to be important in patient's adherence to treatment, a predictor of clinical competence.[22]

Caring of mental illness requires understanding the patient perception and concern recognizing his individuality.[36] Nurses evaluated in the present study reported to

address, identify and respond to emotions of patients in a therapeutic relationship in accordance with their empathic skills.

Patients presentation, in particular the facial expression, frequently gives information about their emotional state[5,10] and might reflect their illness state[2]. We found that high accuracy in recognition of facial happiness and surprise stimuli were related with the ability for gathering information and to identify positive symptoms. Research suggest that the identification of an intended emotional action can generate empathic reactions[5]. Taking into account the empathic reaction to a stimulus, in the current study the self-perceived empathic attitude and attending behavior were associated with the ability to recognize the six basic emotions using in the BESST. Addressing emotions was also significantly and positively associated with fear emotion recognition ability. Ekman (2003)[1] suggest that responding to the emotion fear requires a well-developed capacity for concern to respect. Nurses must recognize and address their patients' fear, be able to see their perspectives and to comfort them.

A complex pattern was detected regarding specific emotions recognition and communication strategies employed by nurses. This may be related with differences in the ability to recognize emotions frequently misinterpreted as surprise. Surprise is frequently confused with other emotions[1], especially with fear as showed in present results.

This study presents a number of limitations, as the reduced sample size of participants and the absence of a control group. It would be important to have a sample of nurses working in different institutions and settings.

The use of pictures (static stimulus) and non-limited exposure time to emotion recognition tests can be regarded as limitations, although the majority of the research conducted in the field follows similar methodology. Static method is reported to be sufficient emotion recognition, albeit a dynamic stimulus ensure a more naturalistic settings[46, 50] and facilitate recognition[50].

Self-reported scales present several limitations in the assessment of behaviors or skills. In evaluating empathy, IRI might not capture the essence of empathic care provided by

nurses. Usually applied in the general population measures are needed to assess nurses' empathic skills.

5. Conclusion

Understand patient's emotions from non-verbal emotion recognition are a relevant communication skill and an essential function of the nursing discipline. In psychiatric nursing, the disturbed behavior and emotion of psychotic patients represents additional difficulties in clinical communication. The ability to identify emotions can be particularly useful to psychiatric nurses in order to correctly assess their patients' emotional and psychiatric state, clarifying the emotional disturbance. Empathy is also an essential competence of nurses. Empathy and the uses of effective communication skill in the clinical encounter are linked to better health outcomes, particularly difficult to obtain in psychiatric disorders. Research is scarce examining the ability of mental health professionals to recognize emotions from non-verbal communication; also no research was found on its association with empathy.

This study elucidates and provides information about the use of communication strategies by nurses interacting with psychiatric patients. Results uncover differences in emotional recognition regarding body and facial stimulus, and elicit specific associations between ability to recognize emotions, empathic dimensions and specific skills nurses report to use in psychiatric settings. The reciprocal role of empathy and emotion recognition in caring for psychiatric patients needs further clarification. Objective evaluation of nurses skills in dealing with acutely and severely ill patients present methodological challenges but will permit to assess specific professional behaviors and its impact in nurse-patient relationship. As a pioneer study in psychiatric nurses, the present works convey useful reflections for subsequent research.

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ARTIGO DE INVESTIGAÇÃO II

Nurse's communication with psychiatric patient: the role of self-efficacy and burnout

Resumo

Objectivo: Para os enfermeiros estabelecerem uma comunicação adequada com os doentes é fundamental eficiência profissional e garantia de qualidade dos cuidados de saúde. Lidar com doentes com transtornos mentais graves, apresentando pensamentos e percepções alteradas, desafia as capacidades de comunicação dos enfermeiros. Além disso o ambiente de trabalho, o número de doentes e a gravidade da doença pode contribuir para o aumento da vulnerabilidade ao burnout e a redução da capacidade de se comunicar. O objetivo deste estudo foi avaliar como os enfermeiros percebem a sua capacidade de comunicar com os doentes psiquiátricos e a relação entre da sua auto-eficácia e o burnout experienciado.

Métodos: Cinquenta e dois enfermeiros (80.8% mulheres) a trabalhar em serviços de internamento e consulta externa de psiquiatria aceitaram participar num estudo descritivo transversal. As características sociodemográficas, a auto-eficácia e o burnout – *Maslach Burnout Inventory* (MBI) foram avaliados. Aos participantes foi pedido para identificar as barreiras para uma boa comunicação com os doentes psiquiátricos severamente doentes. Os resultados foram analisados utilizando uma análise estatística convencional, valores padronizados e correlações através de "Statistical Package for Social Sciences" (SPSS) v.20.0.

Resultados: Os enfermeiros identificaram o número de doentes (82.7%) e as frequentes interrupções (78.2%) como os factores que prejudicam a suas capacidades de comunicação. Os factores facilitadores referidos foram a experiência (57.7%) e os conhecimentos teóricos (32.7%). A severidade dos sintomas dos doentes psicóticos (doentes fisicamente agressivos e agitados) foram identificados como factores dificultadores na comunicação, enquanto a presença de sintomas positivos e distúrbios afectivos foram considerados como tendo uma menor dificuldade. Os participantes mostraram elevados valores de auto-eficácia, positivamente correlacionado com os especialistas em psiquiatria e saúde mental (p=0.048). A avaliação do burnout mostrou que a maioria dos participantes apresenta elevada Exaustão Emocional (72.5%), moderada Despersonalização (47.1%) e baixa Realização Pessoal. Foi detetado uma correlação positive entre Relação Pessoal e auto-eficácia (r=0.304, p= 0.030).

Conclusão: As características clínicas dos doentes psicóticos e as elevadas exigências da carga profissionais desafiam a capacidade dos enfermeiros comunicarem de forma eficiente com os doentes psiquiátricos. Este estudo fornece insights sobre os fatores percebidos pelos enfermeiros que afetam as suas competências de comunicação e indica a necessidade de treino de habilidades de comunicação.

Palavras-chave: Comunicação dos enfermeiros, doentes psicóticos, auto-eficácia e burnout.

Abstract

Purpose: To establish an adequate communication with patients is crucial for nurse professional efficiency and a guarantee of health care quality. Dealing with patients with severe mental disorders presenting disturbed thoughts and perceptions, challenges nurses communication skills. Moreover work environment, number of patients and severity of illness might contribute to enhance vulnerability to burnout and reduced ability to communicate. The purpose of this study was to evaluate how nurses perceive their ability to communicate with psychiatric patients, and the relationship between communication skills, self-efficacy and burnout.

Method: Fifty two nurses (80.8% females) working in psychiatric inpatient and outpatients wards agreed to participate in a cross-sectional descriptive study. Socio-demographic and professional characteristics, self-efficacy and burnout (Maslach Burnout Inventory - MBI) were assessed and nurses were asked to identify barriers to a good communication with severely ill psychiatric patients. The results were analyzed with conventional statistical analysis, standardized values and correlations using Statistical Package for Social Sciences (SPSS) v.20.0.

Findings: Nurses identified number of patient (82.7%) and frequent interruptions (78.2%) as factors mining their communication skills. The major facilitating factors referred were professional experience (57.7%) and theoretical knowledge (32.7%). The severity of the psychotic disease (patients physically aggressive and agitated) was identified as a contributor to difficulties in communication while the presence of positive symptoms and affective disturbances were considered to have a positive influence. Nurses showed high self-efficacy scores, positively correlated with a psychiatry and mental health clinical specialty (p=0.048). Burnout evaluation showed that the majority of the participants presented high levels of Emotional Exhaustion (72.5%), moderate depersonalization (47.1%) and low Personal Accomplishment (76.5%). A positive correlation was detected between Personal Accomplishment and self-efficacy (r=0.304; p=0.030).

Conclusion: The clinical characteristics of psychotic disorders and high professional load demands challenge nurses' ability to efficiently communicate with psychotic

patients. This study provides insight into the factors perceived by nurses as affecting their communication competencies and indicates the need for communication skills training.

Key-words: Nurse communication, psychotic patients, self-efficacy and burnout.

1. Introduction

Clinical communication: benefits and influencing factors

Nurses´ communication skills are recognized to be essential to an effective care and a decisive element of clinical competence[1-3], complex[4, 5], challenging to study[5] and to assess[5, 6]. Integrates verbal, non-verbal[6, 7] and interpersonal´ skills including: eye contact, body orientation, interpersonal distance, gestures, posture, tone of voice, active listening, prompts, questioning, reflection, emotion identification and response, empathy,[8] touch, among others.[9] Recent research established an outline for learning and improve communication skills which have been reported to contribute to better health outcomes and higher patients' satisfaction[10]. Furthermore, several studies have established communication and interpersonal skills as vital competences that might ensure health promotion, diagnostic, treatment and rehabilitation[11] acting as quality indicators[12]. These skills influence satisfaction, adherence[1, 2, 13-16], course of disease[1, 2, 13-15], therapeutic relationship[17] symptom reduction and psychological status[11], and number of urgent admissions to psychiatric hospitals by legal detention[18]. Facilitating and impending factors interfere with clinical communication and can obstruct or improve the nurse-patient relationship. Time constraints, unavailability, illness, altered mental state, medication effects, psychological or emotional distress, gender differences[15], racial or cultural differences[15, 19], insufficient time[20, 21], workload demands[20, 22] patients' anxiety, fear of physical or verbal abuse, unrealistic patient expectations[22] and context setting[21] are suggested by research literature as challenging nurse communication ability.

Communication and psychiatric context of care

Communication is understood as the heart of psychiatric practice and a particular challenge to psychiatric nurses interacting with psychotic patients[17, 23]. Severely ill psychotic inpatients demand specific skills to an effective communication and therapeutic relationship, and frequently psychiatric nurses have to develop abilities to correctly assess their patient' emotional states[24]. Bowers and colleges stated that it is "incredibly challenging to spend time with, provide care to and treat" acutely psychotic

patients[18]. It involves different adjustments, approaches and interactions[8]. Acute mentally ill can present "a perplexing range of behaviors and challenges to normal social interaction"[18] and an impaired ability to communicate effectively[24]. Thus, psychotic symptoms interferes with the process and ability to thing and communicate[1, 8]. The characteristics of severe psychiatric disorders may complicate regular interaction with the professionals. Patients may be euphoric or extremely depress, and present incongruent and unpredictable emotions and behaviour. His thoughts might be running quickly or slowly, they might be obsessed with bizarre ideas or doing disturbing interpretations of the world [1, 8, 18] and can be deeply unwell, severely deluded, suspicious, hostile and aggressive[18].

Self-efficacy and communication

Bandura introduced the concept of self-efficacy[11, 25]. Self-efficacy or confidence refers to a person´s evaluation of his capability to execute a specific task and the expectation of being able to perform certain behaviour successfully[14] Perceived self-efficacy is an important issue for a person belief in his ability to establish and complete a desired goals[26], and can predict individual performance[11]. High confidence to achieve successfully an action is a good predictor of the use of new skills and can serve as a proxy for behavioural measures of skills[14, 27]. "Skilled communication is essential for nurses in order to maintain effective and sensitive relationship with patients".[16] Given the importance of self-efficacy in the communication task and in the interaction with patients, it is important to evaluate confidence nurse's possess to successfully communicate with patients. Self-efficacy has been broadly studied in communication skills training to assess and measure changes in communication efficiency and the relationship between self-confidence.[11, 14, 27, 28].

Self-efficacy perception can change, and consequently the correspondent performance and behavior, as a result of a variety factor namely learning, experience, feedback, personal knowledge and skills, physical and psychological condition, self-esteem, interpersonal environment, available time, task complexity and stress[11]. Previous investigations have found that higher scores of perceived self-efficacy is related with effective regulation of the stress development, higher self-esteem, better well-being,

better physical condition, better adaptation, while lower self-efficacy is associated with increased risk of depression and low subjective well-being[29].

Nurses and experienced of burnout

Maslach and Jackson[30] classily related burnout to a psychological syndrome of emotional exhaustion - reduction of emotional resources and lack of energy to face another day; depersonalization - negative attitudes and feelings and a reduced compassion to service receiver; and low personal accomplishment – tendency to evaluate negatively the person's work, feelings of reduced competence and dissatisfaction with job accomplishment, which frequently occurs in individuals that have strong connection with or care for other people[30-32]. "Thereby, emotional exhaustion refers to feelings of emotional overload and job exhaustion, while reduced personal accomplishment and depersonalization relates to the negative evaluation of the self and others"[26]. Burnout frequently results of a combination of very high expectation and persistent situational stress[33].

Health care professionals appear to be at higher risk of burnout than others professional[34]. Research suggests that nurses are more susceptible to emotional exhaustion if they are exposed to increased psychological demands[26, 33]. Nurses work context and characteristics, high demands and the frequent exposure to emotionally demanding situations are a risk for burnout[3, 30, 31, 35, 36]. Research in professional stress and burnout in nurses has mostly concentrated on general nursing rather than in the psychiatric and mental health settings[33]. However nurses of psychiatric wards are particularly exposed to high levels of stress[37]. Work stressors identified include work overload[31, 34, 37], , lack of clarity, task ambiguity, supervision problems [33], undefined roles and responsibilities[37], role conflict, responsibility for others' lives, poor relationships at work and professional conflicts, inadequate salaries, lack of chances for progression, absence of support, overtime[31], shift work[34], amount of time that nurses spend with patients, patients ´poor prognosis[33], emotional demands[33, 34], patients that can escape, suicide and aggressive patients[3] and communication with patients[37, 38]. Age has been the socio-demographic factor more frequently related to burnout[31].

Furthermore, burnout may negatively affect the quality of patient care[33, 39, 40], trigger early retirement and increase the risk of medical errors[31], professionals mental and physical health, productivity and effectiveness at work, as well as patients' outcomes[34, 36] patient dissatisfaction[34, 36, 41] lower quality of nursing patient care and lower awareness of patient safety[40].

Self-efficacy and burnout

Despite the abundance of nursing literature on burnout, this variable have been generally addressed individually or in combination with other variables related to the clinical environment. Regarding the association between burnout and perceived efficacy in clinical communication however studies are scarce[26]. Ernold and coworkers[38] showed that higher levels of emotional exhaustion and depersonalization in oncology nurses were linked to lower self-efficacy in communication skills [38] Self-efficacy has been regarded mostly as a dependent variable in communication skills training[42].

Aims

This presented research aimed: 1) to describe nurses' self-perspective of communication and it´s influencing factors 2) to evaluate self-efficacy; 3) measure nurses' burnout level and 4) to explore the association between communication skills, self-efficacy and burnout.

2. Method

Participants

Recruitment of participants followed a snow ball method and the participation was voluntary. The study was performed in a hospital in the Northern Region of Portugal and participated fifty two nurses working in inpatients and outpatients psychiatric wards. A communication skills workshop was offered to all participants.

Procedures

The fifty two nurses invited to be part of the study were nurses working in outpatients, chronic, acute and intensive wards ensuring the daily interact with psychotic patients. Conversely service directors, day center, home care nurses and nurses working in the occupational therapy units were excluded. The data collection was performed between May and September 2013. After the distribution of verbal information about the study aim and procedures, the written information, informed consent form and the battery of questionnaires for data collection was delivered in an envelope by one of the researchers. After conclusion of the questionnaires, participants were requested to deposit the signed inform consent and the evaluation instruments in two separate boxes in order to preserve confidentiality and anonymity. A code number was attributed to each questionnaire.

Using a different nurse sample a pretest was performed to estimate feasibility and elucidate difficulties and doubts regarding study procedures and assessment battery.

Instruments

1. *Socio-Demographic and professional characterization*

An original questionnaire was used to assess the socio demographic and professional characteristics of the studied population including age, gender, professional and academic qualifications and employment status.

2. *Communication characterization questionnaire*

Question regarding how nurses describe their ability and challenges in communicating with psychotic patients were included. Nurses were asked to identify context (privacy, physical context) clinical (acute symptoms) and personal (interpersonal relationship) variables that might influence their communication ability. Questions included in the questionnaire were based on literature review on clinical communication, expert consultation and researchers' experience.

3. Self-efficacy assessment

Smith and coworkers [14] developed an attitude towards psychological skills questionnaire with 38-item to access resident's attitudes towards psychosocial skills used in medical care (range of Cronbach's α 0.77 to 0.90). This questionnaire assesses three different attitudes: self-efficacy, outcome expectation and commitment[14], rated with seven-point Likert scale. A Portuguese version, adapted and translated by Carvalho and coworkers was used to assess participants' sense of self-efficacy towards clinical communication[27]. Each item assesses how confident nurse is in using the skill described in clinical encounter.

In order to evaluate the internal consistency of this instrument, the Cronbach´s Alpha was determined. The results indicate excellent internal consistency in the use of self-efficacy measurement (Cronbach's α=0.91).

4. Maslach Burnout Inventory (MBI-HSS)

Burnout was measured with a Portuguese version[43] of the Maslach Burnout Inventory (MBI-HSS) of Maslach and co-workers[30]. Regarding to the internal consistency the Cronbach's alpha this inventory shows good psychometric qualities (Cronbach's alpha range 0.71 – 0.90)[30]. This scale consists of 22 items using a Likert scale of 7 points (0 – never to 6 – every days), referring to last three months. The aim of this inventory measure burnout in relation to the three separate but correlated subscales: Emotional Exhaustion (EE), depersonalization (DP) and personal accomplishment (PA)[30, 44, 45].

Burnout evaluation with the MBI can be categorized into low, moderate and high level. Regarding the EE subscale, scores lower than 16 are considering low, values between 17 and 26 moderate and values highest than 27 high. In the DP sub-scale scores lower than 6 are considered low, between 7 and 12 moderate and above 13 high. Inversely, in PA sub-scale scores greater than 39 are considered as low, between 32 and 38 are moderate and below 31 are high[46].

In order to evaluate de internal consistency of the different instruments used, the Cronbach´s Alpha was determined. The internal consistency of the EE was found to be good (Cronbach's α = 0.88). The internal consistency of the DP was found to be satisfactory (Cronbach's α =0.73) as well for the PA subscale (Cronbach's α =0.75).

Ethical considerations

The study was submitted and approved by the Ethics Committee and Administration Council of the hospital. After being informed of the study's objectives, approaches, expected benefits and possible discomfort all nurses signed an informed written consent form. The confidentiality and privacy of the collected data were guaranteed.

Statistical analysis

Conventional statistical analysis, standardized values, graphics, T-tests, Spearman correlations were used with SPSS v.20.0. The independent T-test and Paired Sample T-test was used to compare quantitative measures. For the categorical variables the Chi-square test and ANOVA one way were also used. The confidence interval (CI) used was 95 % and the significance level for tests was established at $\alpha \leq 0.05$ level. Bonferroni correction was used for multiple correlation analysis.

3. Results

Socio-Demographic and professional characterization

From the 52 nurses included in the study, 42 (80.8%) were female. The mean age of the total sample was 36.9 (SD 9.33) years. Participants presented a mean of 13.1 (SD 8.84) years of professional experience. The education showed a mean value of 16.0 (SD 2.65) years. A total of 43 (82.7%) nurses had a graduate´s degree and 7 (13.5 %) nurses presented a master´s degree. Thirty five nurses were clinical nurse specialists (psychiatric and mental health) with a mean experience of 6.6 (SD 6.10) years. Five had clinical communication training (9.6%).

The majority of the sample was working in chronic inpatients ward (44.2%), 8 (15.4%) in acute inpatients ward, 7 (13.5%) in intensive inpatients ward and 5 (9.6%) in outpatients ward. The mean number of hours of work per week was 37.7 (SD 7.80) and the majority (76.9%) of the nurses performed rotated shifts. The mean number of patients per shifts was 16.4 (7.54). The social-demographic and professional characterization was similar in both genders and is detailed in Table 1 and Table 2.

Table 1: Socio-demographic characterization

	Total n =52	Woman n = 42	Men n = 10	*P*
Age (years)[1]	36.9 (9.33)	36.9 (9.26)	36.9 (10.1)	0.994[3]
Range	25-61	25-57	27-61	
Marital status[2]				
Single	21 (39.9)	18 (42.9)	3 (30.0)	
Married	24 (46.1)	17 (40.5)	7 (70.0)	0.203[4]
Divorced	7 (13.5)	7 (16.7)	0 (0.0)	
Education (years) [1]	16.0 (2.65)	16.2 (2.72)	15.3 (2.34)	0.391[3]
Academic Degree [2]				
Graduate´s Degree	43 (82.7)	35 (83.3)	8 (80.0)	0.644[4]
Master´s Degree	7 (13.5)	5 (11.9)	2 (20.0)	
Clinical Communication training[1]				
Yes	5 (9.6)	4 (9.5)	1 (10.0)	0.655[4]
Clinical nurse specialists				
Yes[2]	35 (67.3)	28 (66.7)	7 (70.0)	0.655[4]
Years of experience[1]	6.6 (6.18)	6.9 (6.34)	4.8 (5.56)	0.462[3]

[1] Mean (Standard Deviation), range (min. – max.); [2] T-Test; [3] n (%); [4] Chi-square Test

Table 2: Professional characterization

	Total n = 52	Woman n = 42	Men n = 10	*P*
Experience (years)[1]	13.1 (8.84)	13.0 (8.65)	13.3 (10.07)	0.930[2]
range	1-37	1-32	3-37	
Ward services				
Outpatients	5 (9.6)[3]	5 (11.9)	0 (0)	0.132[4]
Chronic inpatients	8 (15.4)	7 (16.7)	1 (10.0)	
Acute inpatients	23 (44.2)	19 (45.2)	4 (40.0)	
Intensive inpatients	7 (13.5)	4 (9.5)	3 (30.0)	
Work hours per week[1]	37.7 (7.80)	38.1 (7.91)	36.25 (7.55)	0.508[2]
range	30-68	30-68	30-52.5	
Patients per shift	16.4 (7,54)	16.4 (7,81)	16.4 (6.69)	0.979[2]
Shifts				
Rotated shifts	40 (76.9)[3]	33 (63.5)	7 (70.0)	0.563[4]
No rotated shifts	12 (23.1)	9 (21.4)	3 (30.0)	

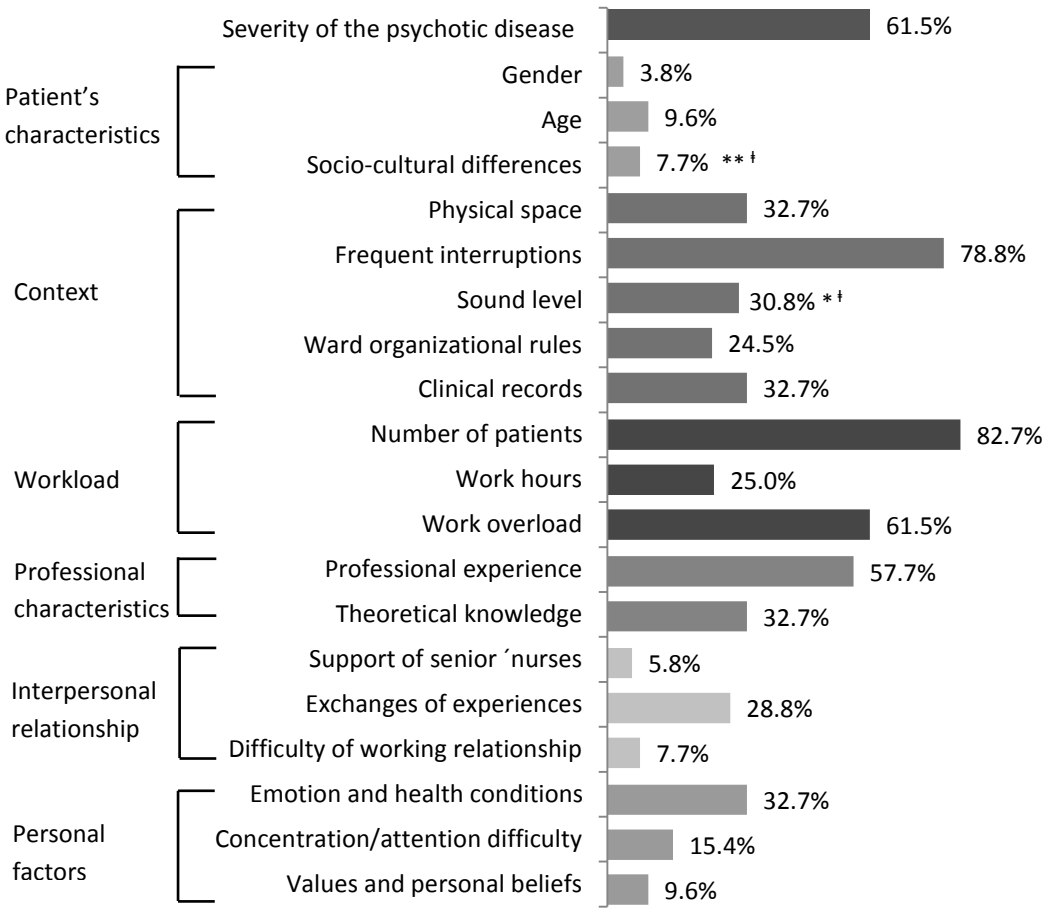
[1] Mean (Standard Deviation), range (min. – max.); [2] T-Test; [3] n (%); [4] Chi-square Test

Results of nurses 'communication characteristics assessment

Influencing factors in nurses 'communication

Number of patient (83%), frequent interruptions (79.2%), severity of the psychotic disease (60.4%), behavioral changes of patients (60.4%) and work load (60.4%) were identified by nurses as influencing their communication with psychotic patients. The facilitating factor referred was professional experiences (5.5%). Results are detailed in the graph 1.

Graphic 1: Influences of nurses ´communication

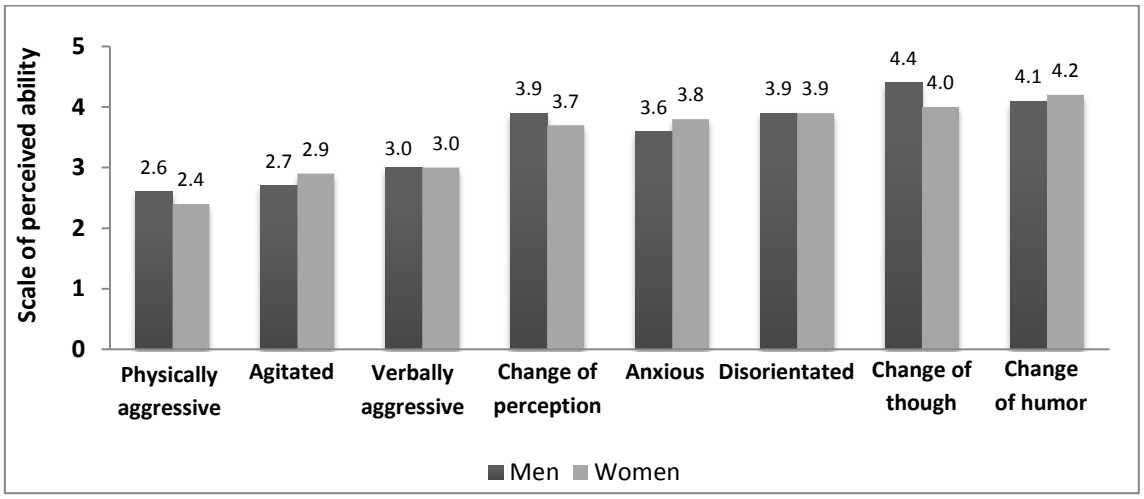


* Significance at 0.05 level; ** Significance at 0.01 level; ǂ differences between genders

Nurses perception of their ability to communicate with psychotic patients according to symptomatic presentation.

The results reveal a highest mean score (4.2; SD 0.64) for patients with mood disturbances and the lowest mean score (2.4; SD 0.97) for patients physically aggressive. Considering the total sample, no statistically significant differences were detected regarding participants' gender and professional characteristics. Nevertheless female participants referred patients with mood disturbances as the most difficult (4.2; SD 0.64) and male participants reported patients with change of thought (4.4 SD 0.54) as the most challenging. The lowest mean score was attributed to patients physically aggressive, and was similar in both genders (2.38; SD 0.98 in female and 2.57; SD 0.98 in male). Graphic 2 detail how nurses perceive their ability to communicate with psychotic patients.

Graphic 2: Self-perceived nurses´ ability to communicate with psychotic patients according to symptomatic presentation



Self-efficacy assessment

A high score (Mean 90.7; SD 10.44) in the self-efficacy scale was detected in the total sample comparing with the maximum score of the scale (max. 110) with statistically significant higher scores for psychiatric nurse specialists (92.51; SD 10.1; p=0,048) when compared with no clinical psychiatric and mental health specialists.

Nurses showed higher scores with confidence to build a good therapeutic relationship with patients (Mean 5.77; SD 0.88) and identifying patients' non-verbal communication (Mean 5.75; SD 0.91). On the contrary, low scores were found with confidence to communicate with patient unable to talk (Mean 4.90; SD 1.07) and giving bad news an adequately way (Mean 4.69; SD 1.25).

A statistically differences among gender´ participants in reported confidence to assertively deal with emotions (Men>Women; p=0.015) was found. Similar results were found regarding other professional characteristics.

Burnout evaluation (MBI)

The majority of the participants presented high levels of EE (72.5%), moderate level of DP (47.1%) and low PA levels (76.5%). A significantly higher score (p = 0.033) was detected in male participants (Mean 13.9; SD 7.0) when compared with female (Mean 9.7, SD 4.7). Results of the MBI scores are presented in Table 4.

Table 4: Burnout evaluation (MBI)

MBI sub-scales		Total	Women	Men	*P*
Emotional Exhaustion (EE)		**36.0 (10.8)**[1]	**35.6 (10.8)**	**38 (11.8)**	**0.552**[2]
	Low	0 (0)[3]	0 (0)	0 (0)	
	Moderate	14 (27.5)	12 (28.6)	2 (22.2)	0.527[4]
	High	37 (72.5)	30 (71.4)	7 (77.8)	
Depersonalization (DP)		**10.5 (5.4)**	**9.7 (4.7)**	**13.9 (7.0)**	**0.033***
	Low	13 (25.5)	11 (26.2)	2 (22.2)	
	Moderate	24 (47.1)	22 (52.4)	2 (22.2)	0.099
	High	14 (27.5)	9 (21.4)	5 (55.6)	
Personal Accomplishment (PA)		**42.8 (6.5)**	**42.5 (6.5)**	**44.1 (7.2)**	**0.406**
	Low	39 (76.5)	32 (76.2)	7 (77.8)	
	Moderate	10 (19.6)	8 (19.0)	2 (22.2)	0.791
	High	2 (3.9)	2 (4.8)	0 (0)	

[1] Mean (Standard deviation); [2] T-test; [3] n (%); [4] Pearson Chi square

No others significantly differences were found regarding context characteristics (ward service) and nurses' shifts (works hours, patients per shifts) in the MBI sub-scales.

Research results indicates that DP is positive statistically significant correlated with EE dimensions (r= 0.562; p= 0.001) and negative statistically significant associated with PA (r= -0.417; p= 0.002).

Correlations between self-efficacy and Personal Accomplishment (MBI) subscale

A statistically significant positive correlation between PA and total self-efficacy score was detected. Personal Accomplishment presented furthermore a statistically significant positive correlation with confidence to identify patient non-verbal cues (r=0.362; p= 0.009), assertively deal with patient emotions (r= 0.319; p=0.022) and identify unexpressed feelings of patient (r=0.332; p=0.017).

4. Discussion

Identified factors impinging communication between nurses and psychiatric patients

Clinical communication in psychiatric context is particularly important for the patient´s healthcare care[11] and at the same time a challenge to nurses devoted to deal, understand and support acutely ill psychiatric patients [17, 23 47]. A number of difficulties and obstacles have been identified in the establishment of an adequate nurse-patient communication, which provides the basis for an empathic relationship. Anoosheh and colleagues[21] suggest that identifying the barriers that obstruct the communication between nurses and patients can provide a chance to eliminate these negatively influencing factors[21]. A review of literature indicated that such factors derive from nurses, patient's characteristics and the environment. Also psychosocial aspects of care and emotional burden related with clinically difficult situations were associated with less effective nurse-patient communication. In the current study nurses identified as main obstacles to a fruitful communication: the number of patient that each nurse should attempt per shift (nurse-patient ratio) and the frequent interruptions during

the communication with patients. As identified by others, lack of time and privacy are frequently identified obstacles to the application of communication skills.

On the other hand, the facilitating factors referred by our sample were professional experiences and theoretical knowledge's. The ability to recognize pathological behaviors and emotions can facilitate an adequate communication, permit nurses to adjust their own behavior and modulate their emotional reaction.

Psychiatric patients' characteristics can constitute a significant overload to nurses professional. Zamanzadeh and co-workers[48] demonstrated that factors influencing nurse‐patients communication were related to the condition of the patient[48]. In psychiatric settings, patients can express unstable behaviours, can be deeply unwell, severely deluded, suspicious, hostile and aggressive[18] challenging the interaction with the professionals[1, 8, 18]. The impact of the severity of patients' disease was analysed in the present study and nurses declared that communication with physically aggressive and agitated patients was more difficult. Interestingly patients with positive symptoms and affective disturbance were considered less demanding.

Self-efficacy in Communication

Research has demonstrated that self-efficacy can predict the performance of an individual[11]. In the current study, nurses reported feeling confident about their ability to communicate effectively with patients. The higher score was found in the ability to identify patient nonverbal communication and to build a clinical relationship with patient. Conversely participants felt less efficient when communicating with a patient unable to talk or when giving bad news was necessary. Research suggest that high self-efficacy is fundamental to nurses performance serving as a proxy for behavioral measures of skills and is a trusty predictor to successfully communication performance[14].

Ammentorp and co-investigators in line with other studies suggest that "self-efficacy can change as a result of learning, experience and feedback; and the magnitude of self-efficacy changes corresponds closely to change in performance"[11]. A statistically significant higher score was found for clinical psychiatric and mental health nurse specialists when compared with non-specialist nurses. These results also underscore

nurses' perception of the facilitating role of knowledge and experience, referred previously. Ammentorp and co-workers[11] also suggest that a diversity of internal and external factors such as personal knowledge and skills can influence self-efficacy and thereby performance[11]. Thus, knowledge's and skills can be a predictable reason for the difference between clinical specialist and no clinical specialist in psychiatric and mental health. Clinical training programme in nurses' specializations aims to increase the capacity to assess, interact and professionally relate with psychiatric patients. This can explain the higher training reported by nurse specialists which might improve the self-efficacy and consequently the communicational performance.

Higher confidence was reported by male professionals. Jean and co-author[49] suggest that nurse's gender might influence the level of assertiveness[49], and confidence in their ability to communicate in difficult situations. Assertiveness is considered a communication style useful in nurse's professional contexts and an important behaviour for the implementation of successful relationships[16].

Moreover nurses valued competency and training in communication skills[50]. Quality of nurses communication skills remains an unfulfilled concern in nursing practice and in order to lead to improvements in communication skills, training must be done[51].

A review of the literature reported the absence of studies evaluating communication self-confidence among nurses in context of their work[38]. Self-confidence assessment was previously performed to evaluate teaching programs on communication skills, or monitor clinicians confidence in clinical communication[11, 14, 27, 52]. Others have investigate the perceived nurses self-efficacy in dealing with stressful situations[26], but to the best of our knowledge no previous work focused on communication self-efficacy assessment in psychiatric nurses.

Psychiatric nurse's burnout level

Burnout is classily related to a psychological syndrome of Emotional Exhaustion, Depersonalization and low Personal accomplishment [30]. A considerable number of studies analysed burnout in psychiatric nurses since they are susceptible to suffer considerable professional stress[33]. Nevertheless Morse and colleagues[53] in a literature

review of burnout in mental health service conclude that "relatively few well-designed, empirical studies have examined burnout in mental health"[53].

Nurses participating in the present study presented high levels of burnout showing significant Emotional Exhaustion, a moderate level of Depersonalization, and in general reporting low Personal Accomplishment. Our results are in line with the burnout scores detected in oncology nurses by Ernold and colleagues[38] who found that the majority of the nurses reported high levels of emotional exhaustion. On contrary, recent studies assessing burnout in paediatrics and general registered nurses detected low to moderate levels of burnout [40, 26].

Gandi and colleagues [37] showed that values of burnout in nurses can vary. Ernold and colleagues[38] suggested that discrepant findings might be understood as a result of numerous variables (intrapersonal, interpersonal and organizational factors)[38]. Although research has focus on general nursing burnout [33] nurses of psychiatric wards are vulnerable to high levels of stress and demands, favouring the occurrence of burnout[37].

Age has been the socio-demographic factors most consistently related to burnout[33, 34, 38, 54]. Lower level of burnout among older professionals may result of their personal developmental process that protects them from psychological distress and professional exhaustion[34]. In the current study no correlation was detected between age and burnout level. A debate is also taking place on the role of gender in susceptibility to burnout, relating working women to higher risk for burnout[55]. Interestingly in our study depersonalization revealed higher scores in male participants, not consistent with the literature.

Shift work is pointed as one of the occupational risks for burnout in health care jobs[34]. To ensure continuity of care nurses work by rotated shifts, a recognized stressor and a risk for sleep quality, well-being and lifestyle[54]. In the current study nurse's shifts were not associated with higher burnout levels, in line with the statement reported conflicting results[34] regarding the relationship between shift work and burnout in health care workers.

Work load – work hours per day and per week and context variables (ward service) – has been classically related with burnout level[31, 34, 37]. In our work no association was found between burnout levels and work hours per week and ward service. This finding

may reflect the particular characteristics of psychiatric settings where emotional and psychological demands can represent a more powerful influence on professional stress. Psychiatric nurses in our study experience high Emotional Exhaustion probably due to severity of psychotic patients' disease and possible the challenges to communicate with psychiatric and mental ill patients, and less related with workload. Ernold and coworkers[38] suggest that communication skills are a major factor contributing to physician stress and emotional burnout[38].

Despite the abundance of nursing literature on burnout, this variable have been addressed individually or in combination with variables related to some aspects of the clinical environment. No studies to date have explored psychiatric nurses' communication self-efficacy and burnout. Perceived self-efficacy may be regarded as an individual resource that reduces burnout[26, 38]. In line with this view, we detected a positive relation between Personal Accomplishment and self-efficacy score. Furthermore a positive evaluation of professional value and work measured by this subscale was associated with the confidence to identify non-verbal expressions, deal with emotions and identify unexpressed feelings of the patient.

The recruitment method and sample size can be considered limitations of the present study. The use of self-reported measures is also a limitation since participant´s responses may not accurately reflect their true performance.

5. Conclusion

The clinical characteristics of psychotic disorders and professional demands imposed to psychiatric nurses' challenge their ability to efficiently communicate with psychotic patients. This study provides insight into the factors perceived by nurses as affecting nurse-patient communication. Perceive self-efficacy to communicate, a good predictor of the use of communication skills, is associated with higher satisfaction with professional accomplishment and lower burnout. Nurses identified professional experiences and theoretical knowledge's as beneficial to their ability to communicate with psychotic patients. Communication skills training, not formally included in the

regular curriculum, may reinforce the advantage of specific professional competences, as identified by nurses.

Finally it is important that health institutions develop prevention programs for their nursing professionals, identify nurses at risk for burnout and diminish the adverse effects of working with severely ill psychiatric patients.

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ANEXOS

Anexo A – Parecer da Comissão de Ética para a Saúde e Conselho de Administração do Hospital de Magalhães Lemos, EPE:

Anexo B – Questionário:

- Caracterização sociodemográfica e profissional
- Caracterização da comunicação

ANEXO A

Exmo. Senhor

Presidente do Conselho de Administração do Hospital de Magalhães Lemos, EPE.

HOSPITAL DE MAGALHÃES LEMOS, EPE
Reunião do C.A.
Acta n.º 5/2013

ASSUNTO: Pedido de autorização para realização de projecto de investigação

Eu, Rosa Patrícia dos Santos Marques Acácio, pretendendo realizar neste hospital, onde exerço funções como enfermeira no Internamento E4, o projecto de investigação com o título Comunicação entre enfermeiros e doentes psicóticos – um estudo descritivo da percepção das estratégias de comunicação verbal, não-verbal, da empatia e grau de confiança em comunicar, solicito a V. Exa., na qualidade de Investigador e aluna do Mestrado em Comunicação Clínica da Faculdade de Medicina da Universidade do Porto sobre a orientação da Prof. Doutora Margarida Figueiredo Braga, autorização para a sua efectivação.

Com os melhores cumprimentos,

Porto, de 03 de Janeiro de 2013.

O INVESTIGADOR

R Patrícia S M Acácio

ANEXO B

1. Género:
    1. Feminino ☐
    2. Masculino ☐

2. Data de Nascimento | DIA | MÊS | ANO |

3. Estado Civil
    1. Solteiro(a) ☐
    2. Casado(a) ☐
    3. União de Facto ☐
    4. Viúvo(a) ☐
    5. Divorciado(a) ☐

4. Tem filhos?
    1. Sim ☐
    2. Não ☐

    Se sim, Quantos? ☐

5. Lugar de Residência ☐
    1. Urbana ☐
    2. Rural ☐

6. Número de anos de experiência profissional ☐

7. Número de anos de escolaridade ☐

8. Habilitações Literárias:
    1. Bacharelato ☐
    2. Licenciatura ☐
    3. Mestrado ☐
    4. Doutoramento ☐

9. Possui alguma especialidade?
    1. Sim ☐
    2. Não ☐

    Se sim, qual? ☐

    Se sim, números de anos de experiência como especialista. ☐

10. Possui alguma pós-graduação?
    1. Sim ☐
    2. Não ☐

    Se sim, qual? ☐

11. Possui alguma formação em comunicação?
    1. Sim ☐
    2. Não ☐

    Se sim, qual? ☐

12. Está a frequentar algum curso/formação?
    1. Sim ☐
    2. Não ☐

    Se sim, qual? ☐

13. Que tipo de vínculo tem com a instituição hospitalar?
    1. Contrato sem termo/indeterminado ☐
    2. Contrato a termo ☐

14. Trabalha noutro local?
    1. Sim ☐
    2. Não ☐

    Se sim, onde? ☐

    Se sim, quantas horas trabalha? ☐

    Se sim, que tipo de vínculo?
    1. Contrato sem termo/indeterminado ☐
    2. Contrato a termo ☐
    3. Trabalhador independente ☐

15. Em média:
    15.1. Quantas horas trabalha por semana? ☐
    15.2. Quantos doentes tem por turno? ☐
    15.3. Com quantos profissionais trabalha? ☐

16. Que tipo de turnos faz habilmente?
    1. Trabalho por turnos rotativos (diurnos e nocturnos) ☐
    2. Turnos fixos só manhãs ☐
    3. Trabalho por turnos diurnos ☐

17. Numa escala de 0 a 5 indique um valor que melhor o(a) descreve. Comunico mais facilmente com:

1. Um doente com alterações do pensamento. ☐
2. Um doente com alteração da percepção. ☐
3. Um doente fisicamente agressivo. ☐
4. Um doente verbalmente agressivo. ☐
5. Um doente agitado. ☐
6. Um doente com alterações do humor. ☐
7. Um doente desorientado. ☐
8. Um doente ansioso ☐

18. Tendo em conta a sua experiência, assinale quais os factores que mais influenciam a sua comunicação na interacção com os doentes psicóticos.

18. 1 Factores relacionados com o doente

1. Estado do doente/quadro clínico ☐
2. Humor ☐
3. Alterações do comportamento ☐
4. Sofrimento ☐
5. Alterações do pensamento e/ou percepção ☐
6. Género ☐
7. Idade ☐
8. Diferenças socio culturais ☐

18.2. Factores relacionados com o contexto

1. Espaço físico ☐
2. Interrupções frequentes ☐
3. Nível sonoro ☐

18.3. Factores organizacionais

1. Número de doentes ☐
2. Número de horas de trabalho ☐
3. Rotinas do serviço ☐
4. Sistema de registos ☐

18.4. Factores pessoais/profissionais

1. Experiência profissional ☐
2. Conhecimentos teóricos ☐
3. Apoio de colegas mais velhos ☐
4. Troca de experiências com outros profissionais ☐
5. Condições emocionais e de saúde ☐

6. Dificuldades de relacionamento profissional ☐
7. Dificuldade de concentração e de atenção ☐
8. Sobrecarga de trabalho ☐
9. Valores e crenças pessoais ☐